

## WHAT IS CLAIMED IS:

1. A method for enhanced synthesis of biological macromolecules *in vitro*, the method comprising:  
synthesizing said biological macromolecules in a reaction mixture comprising an antifoam agent.
2. The method of Claim 1, wherein said synthesis of biological macromolecules comprises translation of mRNA to produce polypeptides.
3. The method of Claim 2 wherein said synthesis also comprises transcription of mRNA from a DNA template.
4. The method of Claim 2, wherein said reaction mix comprises a volume of greater than about 15  $\mu$ l.
5. The method of Claim 2, wherein said reaction mix comprises a volume of greater than about 100  $\mu$ l.
6. The method of Claim 4, wherein said reaction has a yield that is at least about 90% of the yield in a comparable small scale reaction.
7. A reaction mixture for synthesis of biological macromolecules *in vitro*, the improvement comprising:  
an antifoam agent.
8. The reaction mixture of Claim 7, wherein said reaction mix comprises a volume of greater than about 15  $\mu$ l.
9. The reaction mixture of Claim 7, wherein said reaction mix comprises a volume of greater than about 100  $\mu$ l.
10. The reaction mixture of Claim 7, wherein said reaction generates a yield that is at least about 90% of the yield in a comparable small scale reaction.